

Notice of Allowability

Application No.

10/767,844

Examiner

Igor Kershteyn

Applicant(s)

OKADA, HIDEAKI

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 30 January 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☒ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 01/30/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date ____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

Reasons for allowance

The following is an examiner's statement of reasons for allowance:

The instant invention is deemed to be directed to an unobvious improvement to a hydrostatic stepless transmission over U.S. Patent No. 6,513,325 which teaches a hydrostatic stepless transmission 1, comprising: a hydraulic pump and a hydraulic motor, at least one of the hydraulic pump and motor being variable in displacement; a closed circuit for fluidly connecting the hydraulic pump and motor to each other therethrough, the closed circuit including a pair of oil passages 5a,5b between the hydraulic pump and motor, one of the passages 5a,5b being hydraulically higher-pressured and the other being hydraulically depressed when the hydraulic pump delivers oil to the hydraulic motor; a speed change operation device 11 for changing output rotational speed of the hydraulic motor; and a leak valve 39 interlocking with the speed change operation device 11, wherein the leak valve 39 is connected to the closed circuit.

Regarding claim 1, the improvement comprises the leak valve connected to the closed circuit so that, when the speed change operation device is suddenly operated, the leak valve allows oil to leak from the higher-pressured oil passage to an area hydraulically pressured lower than the higher-pressured oil passage, and then stops oil leakage when operation of the speed change operation device is stopped.

Regarding claim 5, the improvement comprises a leak valve having a leak oil passage for leaking oil from the higher-pressured oil passage of the closed circuit to an

Art Unit: 3745

area hydraulically pressured lower than the higher-pressured oil passage, the leak valve including a cylinder being movable between a valve closing position for cutting off the leak oil passage and a valve opening position for completing the leak oil passage, a biasing member for biasing the cylinder to the valve closing position, and a piston slidably disposed in the cylinder and interlocking with the speed change link member, wherein when the speed change operation device is suddenly operated, the cylinder is moved together with the piston to the valve open position, and then, by stopping operation of the speed change operation device, the cylinder returns to the valve closing position by biasing force of the biasing member while the piston is kept in its shifted position.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of three patents.

Havens (5,235,810) is cited to show a hydrostatic transmission having a pump and a motor and speed change device interlocked with a leak valve but fails to teach the leak valve opening when speed changing device is suddenly operated.

Art Unit: 3745

Takada et al. (6,904,748) is cited to show a hydrostatic transmission having a pump and a motor and speed change device interlocked with a leak valve but fails to teach the leak valve opening when speed changing device is suddenly operated.

Dong et al. (6,837,047) is cited to show a hydrostatic transmission having a pump, a motor, a speed change device, and a leak valve which opens when operating device is suddenly operated but fails to teach the speed change device interlocked with the leak valve.

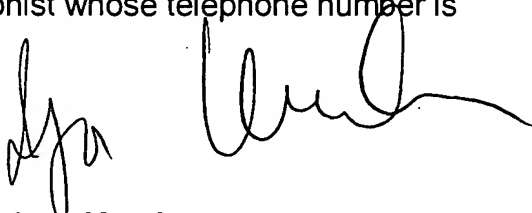
Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK
July 22, 2005



Igor Kershteyn
Patent examiner.
Art Unit 3745


EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

7/25/05